

REMARKS

Applicants have carefully considered the August 20, 2004 Office Action, and the amendments above together with the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claims 14-24 are pending in this application. Claims 14, 16, 17 and 18 have been amended. Support for the amendment is found at page 14, lines 10-15. Applicants submit that by the present Amendment and Remarks, this application is placed in clear condition for immediate allowance. At the least, the present amendments reduce the number of issues, thereby placing this application in better condition for Appeal. Accordingly, entry of the present Amendment and Remarks, and favorable consideration, are respectfully solicited pursuant to the provisions of 37 CFR § 1.116.

Initially, Applicants respectfully request that the U.S. Patent & Trademark Office change its records to include the correct Attorney Docket Number for the present application. The correct Attorney Docket Number is 62807-041.

Claims 14-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yonetsu et al. (U.S. Pat. No. 6,506,513, hereinafter “Yonetsu”) in view of Hockaday et al. (U.S. Pat. App. Pub. No. 2002/0182459, hereinafter “Hockaday”). Applicants respectfully traverse the rejection.

As recited in amended independent claim 14, the fuel cell power generation equipment comprises an anode for oxidizing liquid fuel, a cathode for reducing oxygen, an electrolyte membrane/electrode assembly (MEA) provided between the anode and the cathode, a fuel container for holding the liquid fuel, and a plurality of air vent holes provided in a wall surface of the fuel container. At least one air vent hole has a gas/liquid separation function and at least one air vent hole is kept unsealed from the liquid fuel.

Yonetsu is directed to a so-called laminate type direct methanol fuel cell (DMFC) in which MEAs are laminated approximately in a vertical direction to the surface of MEA. Yonetsu discloses the following at col. 5, lines 45-67:

In the present invention, the liquid fuel tank 1 is equipped with a mechanism for adjusting the inner pressure in order to supply the liquid fuel with a high stability to the fuel vaporizing layer. In order to supply the liquid fuel with a high stability to the fuel vaporizing layer, it is necessary to use a mechanism that permits the liquid fuel to flow out of the liquid fuel tank 1 in accordance with the consumed amount of the liquid fuel within the vaporizing layer. For example, it is necessary to use a mechanism for avoiding a negative pressure, i.e., a mechanism for taking in the air from outside the tank in accordance with the flow of the liquid fuel out of the fuel tank. As a result, it is possible to prevent the inner pressure of the fuel tank from becoming negative relative to the cell body. To be more specific, a fine hole 6 can be formed as a mechanism against the negative pressure on the side wall in the upper portion of the fuel tank 1 as shown in FIG. 1. It is possible to form a plurality of fine holes. Also, it is desirable for the diameter of the fine hole, which is not particularly limited in the present invention, to fall within a range of between about 0.2 mm and 5 mm, in view of the effect of preventing evaporation of an excessive amount of the liquid fuel. (emphasis added)

In the equipment of claim 14, at least one air vent hole “has a gas/liquid separation function” so that the fuel container has an omnidirectional property. As disclosed, the fuel does not spill from the omnidirectional vent hole even when the vent hole faces downward. See specification at page 45, lines 11-15. In contrast, Yonetsu does not disclose or suggest such structure or advantage. Yonetsu discloses an air vent hole that is provided on the surface of a fuel tank to exhaust carbon dioxide gas generated on an anode. There is no gas/liquid separation function. Yonetsu, as described above at col. 5, lines 45-67, discloses that the fine hole is formed as a mechanism against the negative pressure on the side wall of the fuel tank. Thus, the fine hole does not have a property of venting gases, such as carbon dioxide gas, which occurs during power generation in the cell. Moreover, Yonetsu fails to disclose or remotely suggest an air vent hole that is kept unsealed from a liquid fuel as presently claimed.

Hockaday discloses a fuel cell which is equipped to vent gasses which occur during power generation in a cell, but the technique separates methanol and hydrogen gas by use of a membrane. See numbered paragraph [0066]. Although the membrane disclosed in Hockaday has a gas/liquid separation function, the purpose of providing the membrane is entirely different from that of Yonetsu. The Examiner has failed to explain why one having ordinary skill in the art would have been realistically impelled to modify Yonetsu with the unrelated device of Hockaday to arrive at a claimed invention. Indeed, the only basis for such motivation is found in Applicants' disclosure, which is forbidden territory from which the Examiner may not excavate for the motivational element. Accordingly, the rejection is not legally valid for at least this reason and should be withdrawn.

Moreover, Hockaday, as with Yonetsu, fails to disclose or remotely suggest an air vent hole that is kept unsealed from a liquid fuel as presently claimed. Ergo, even if the applied references are combined as suggested by the Examiner, and an Applicants do not agree that a requisite fact-based motivation has been established, the claimed invention would not result. For this reason alone the rejection is not viable and should be withdrawn.

It is believed that all pending claims are now in condition for allowance. Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

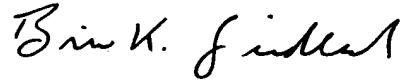
To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including

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extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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